

6 - 9 MAY 2023



23RD ANNUAL SCIENTIFIC MEETING OF THE AUSTRALASIAN COLLEGE OF PHLEBOLOGY HILTON ADELAIDE CONFERENCE HANDBOOK

## THE COLLEGE

The Australasian College of Phlebology (ACP) is a modern and progressive society with a young and energetic governance, a comprehensive training program and a dedicated and passionate membership. The ACP organises annual science-driven, dynamic and innovative congresses, workshops and preceptorships.

We are proud to have introduced modern interventional treatment techniques to Australia and New Zealand in the past 25 years including ultrasound guided sclerotherapy (mid-90s), endovenous laser and radiofrequency ablation (early 2000s) and glue ablation (past 5 years).

The ACP was founded in 1993 as the Sclerotherapy Society of Australia by Dr Paul Thibault. In 1999, the Society officially changed name to the Australasian College of Phlebology to coincide with the introduction of its formal training program. Since then, the ACP has established one of the most comprehensive phlebology training programs in the world. Since 1999, the ACP has graduated dozens of venous specialists who now hold teaching, educational and board positions within the College.

The ACP actively promotes education and research in phlebology and serves the general public, governments, insurance providers, regulatory authorities and the industry as a resource regarding venous disorders. The ACP fellowship represents the multi-disciplinary nature of phlebology and includes a variety of medical specialties such as vascular surgery, dermatology, interventional radiology, haematology, vascular medicine and lymphology. Other members of the college include allied health professionals such as sonographers, scientists and nurses with a shared interest in phlebology. The Australasian College of Phlebology Level 5, 7 Help Street Chatswood, NSW 2067 T: + 61 2 9386 1811 E: acpasm@phlebology.com.au

### **EXECUTIVE BOARD**

President: Dr Lisa Marks Immediate Past President: Dr Simon Thibault Honorary Secretary: Dr David Connor Treasurer: Dr Paul Thibault Dr Stephen Benson Dr Paul Dinnen Dr David Huber Dr Adrian Lim Dr Stuart McMaster Dr Darren Ng Dr Peter Paraskevas Prof. Kurosh Parsi Prof. Neil Piller Dr Andrew Stirling

### ACADEMIC BOARD

Chancellor: Prof. Andre van Rij Deputy Chancellor: Prof. Lourens Bester Dean of Education: Dr Andrew Stirling Director of Training: Dr Lisa Marks Chief Censor: Dr Niloofar Yazdani Boroujeni

## ASM CONVENER

Dr David Connor

## **EXECUTIVE MANAGER**

Zivka Nicholls

**SPONSORSHIP & EXHIBITION** 

Jan Cornay

## **IMPORTANT REMINDERS**

- \* Speakers ensure you upload your presentation in the speakers prep room well in advance of your talk.
- Choose your table for the Gala Dinner, place your name on the chart by 2pm Sunday 7 May.
- Delegates with dietary requirements make your self known to banquet staff.

## WELCOME

Dear Colleagues and Friends,

Finally, we all get to see each other face-to-face. Whilst holding virtual and hybrid conferences has helped us stay in touch and stay up to date whilst the world changed, nothing truly beats interacting with your peers in person. Thank you all for your support of the Annual Scientific Meeting while we had to adapt to increasingly challenging times. It is especially exciting to have our International Invited Speakers once again return to the conference – they have been missed.

Welcome to Adelaide. I hope you find the time whilst you are here to visit the city and all it has to offer. If you can't make it out wine tasting, I hope you've made it to our Welcome Reception, which will give you just a taste of some of the wines of the region.

Once again, we look forward to seeing you at the Conferring Ceremony on Monday night. It is truly exciting to see our trainees hard work and dedication to training rewarded on stage and I hope you join us there to congratulate them on what is an amazing achievement. At the end of the ceremony, roll on up to the Gala Dinner for what will surely be an unforgettable night. The only instruction to Zivka and Jan in organising the dinner was to have fun planning it and I'm confident that you will have a magical time.

Thank you to our Sponsors and Exhibitors, who continually support the College. Without their support our conference would not be possible, so please ensure you visit their stands, interact with them and support them in the same way that they support us.

Finally, a big thank you to Zivka and to Jan for all their efforts in bringing the Annual Scientific Meeting to you. Their hard work and devotion to the college is truly extraordinary.

Dr David Connor Convener, ACP2023 The 23<sup>rd</sup> Annual Scientific Meeting of the Australasian College of Phlebology





David Connor Convenor ACP2023

## LOCATION

## **ADELAIDE, SOUTH AUSTRALIA**

Originally called Tarntanya (red kangaroo place) by the Kaurna people, the original custodians of the land, Adelaide is the capital city of South Australia and was first settled by European free-settlers in 1836.

With a packed events calendar and some of the country's best restaurants and small bars, there's always something exciting happening in Adelaide. If you're around for a few days, experience the best the city has to offer before taking your explorations further to the surrounding wine regions, beaches and outback that make South Australia such a fascinating place to visit.

Autumn is festival season with major events such as WOMADelaide and Tasting Australia. It's also a great time for spotting autumn foliage in the surrounding wine regions.



## **GETTING AROUND ADELAIDE**

There are numerous ways to get to the city from the airport. Take a taxi or ride-share (Uber) for around \$20 to \$25 AUD. Public transport services JetExpress and JetBus offer cheap bus transport to the city. Refer to the Adelaide Metro website for timetables and costs. For a door to door service to major city hotels, Northern Flyer offers a shuttle service. Just jump on board at the airport (after you've paid of course!).

Getting around Adelaide is easy. A Visitor MetroCard provides unlimited travel on all Adelaide Metro buses, trains and trams for three consecutive days from the day the card is first used.

## Free transport

For your convenience, Adelaide Metro provides several free public transport options servicing the city and North Adelaide. Operating daily the free City Connector bus links you to popular city attractions, shopping, dining, education and other services. It's a great way to see the sites when you're on a budget. Buses are wheelchair and pram friendly and start just before 7am each day and finish at 5pm, except on a Friday when they finish at 9:15pm.

There are two different routes available; Route 99A and 99C: loop around the CBD, available Monday to Friday. Route 98A and 98C: loop around the CBD and North Adelaide, available every day. You can travel on the tram in the city centre free of charge from the South Terrace stop, to and along North Terrace.

The free zone continues out to the Adelaide Entertainment Centre where a Park and Ride service is available. This makes the service a great option for visiting the Adelaide Central Markets (alight at Victoria Square), Adelaide Railway Station/ Adelaide Casino (alight at Adelaide Railway Station), the Royal Adelaide Hospital (alight at West Terrace) and the Botanic Garden or Adelaide Zoo (alight at Botanic Garden).

The tram is also free from the Brighton Road tram stop and Moseley Square in Glenelg.

## **FREE CITY WI-FI**

While in Adelaide, you can keep in touch with friends and family using AdelaideFree - a free wireless internet network in outdoor areas across the city centre and North Adelaide. Simply choose 'AdelaideFree' from the available Wi-Fi networks list.

## WEATHER

In autumn, the weather is pleasant with average temperatures between 12.7 - 22.7°C (55 - 73°F) and very little rainfall.



## THINGS TO DO IN ADELAIDE



### TOUR THE ADELAIDE HILLS

Only 20 minutes drive away from Adelaide. Brimming with wildlife encounters and cultural discoveries. You'll find restaurants serving South Australia's best produce, while wineries beckon for you to sample one of their cool climate drops. And a visit to the Adelaide Hills would not be complete without a visit to Hahndorf.



#### TASTE THE BAROSSA

Just a 50 minute drive north east of Adelaide, the Barossa is an internationally-acclaimed wine region. Taste the official best wine in the world, or sip a local drop that's as old as you. For the ultimate foodie's adventure, take the Epicurean Way road trip through the best of the Barossa, and beyond.



## EXPERIENCE KANGAROO ISLAND

With its raw and rugged coastline, impeccably clear waters, natural wonders and wildlife, Kangaroo Island is known as nature's playground. Follow the road less traveled and discover unique wildlife, mouth-watering food and wine, breathtaking scenery and a laid-back lifestyle.



### ADELAIDE CENTRAL MARKET

Step into a thriving hub of food and culture at the Adelaide Central Market. A favourite spot with the locals, produce from all over South Australia pack stalls manned by local producers. Plus it is located next to the Hilton Adelaide.



## GO TO THE BEACH AT GLENELG

Just 20 minutes by tram and you'll be at the beach in Glenelg. Walk along the foreshore, visit restaurants and boutique shops. Sail around the bay at sunset or swim with wild dolphins before kicking your shoes off and pulling up a seat at a bar on the sand.



## SEE SOME AMAZING NATURAL LANDSCAPES

South Australia is home to some of the most spectacular natural scenery you could imagine. From the contrasting everchanging colours of Lake Bumbunga in the Clare Valley to the stunning beauty of the Eyre Peninsula. There is just so much natural beauty that it will be difficult to decide what to see.



## **HILTON ADELAIDE**

The hotel overlooks Victoria Square in the heart of Adelaide's entertainment and shopping district. It is under 500 meters from local attractions like the Central Market and Chinatown, and two kilometres from Adelaide Botanic Gardens and the University of Adelaide. Take a relaxing dip in the heated outdoor pool or visit the wine cellar with over 500 labels.

## ACCOMMODATION

Designed with the discerning traveller in mind, Hilton Adelaide's choice of 377 rooms, ranging from stylish Deluxe rooms to the exclusive luxury of the Executive Floor and suites, sets the standard for guest rooms in South Australia. As a standard, each guest room offers individually controlled air conditioning, Chromecast and WiFi. Other amenities include hairdryer, safe and tea and coffee-making facilities. Smoking and accessible rooms are also available.





## **HOTEL DINING**

**Coal Cellar + Grill**, Hilton Adelaide's signature restaurant, is at the height of dining sophistication in the heart of the city. With a focus on South Australian produce, the modern grill menu is a food and wine enthusiast's playground! The menu has a balance of seafood, vegetarian and meat dishes including the show-stopping signature tomahawk steak – served with grilled vegetables and a selection of homemade sauces. Compliment your meal with a wine from the impressive glass-encased cellar, home to over 500 wine labels including bold Shiraz's from the world famous Barossa Valley to crisp Clare Valley Rieslings!

Modern, stylish, and sophisticated, **The Collins Bar** is an exclusive escape from city life offering a relaxed lounge atmosphere, and cocktails to excite, intrigue and amaze. There's always something marvellous being mixed behind the bar, and something captivating happening in front of it. The bar offers a staggering range of spirits, wines, beers and snacks.





## **FLOORPLAN**

## KEY EVENTS

Phlebology Training Day (6 May) Balcony Rooms 1 - 4

Welcome Reception (6 May) Balcony Rooms 1 - 3

Main Plenary (7-9 May) Ballroom B & C Exhibition and Catering (7-9 May) Ballroom Foyer

Speakers Prep (7-9 May) Suite 2

Hands-on Workshops (8 May) Ballroom A VIP Robing (8 May) Balcony Room 1

Ceremony and Gala Dinner (8 May) Ballroom B & C



\*Floorplan is subject to change

## SOCIAL EVENTS

Delegates with a full registration receive a complimentary ticket to the Welcome Reception as well as the Conferring Ceremony and Gala Dinner. Additional tickets for guests are available for purchase pending availability of seating.

If you did not notify us at the time of registration whether you will be attending any of the included functions it will be assumed that you are not attending and you will not have any tickets in your registration pack. If this has changed and you wish to attend a function please notify the conference staff no later than the day prior to the function.

### MEALS

Meals are included in the registration fee and will be served throughout the exhibition area in the Ballroom Foyer during the session breaks from Saturday 6 to Tuesday 9 May. All buffet foods are labelled to identify dietary requirements. If you have noted a specific dietary requirement in your registration, please make yourself known to the banquets team and they will assist you further.

### NAME BADGES AND TICKETS

Name badges must be visible and worn at all times within the conference venue for access to the meeting. Event tickets will be issued in the delegate pack for delegates who have registered to attend the social functions and must be presented if requested to gain access to the event.

## MOBILE PHONES

Delegates are kindly requested to keep their mobile phones on silent in the rooms where scientific and educational sessions are being held, as well as during poster sessions.

## **INTERNET ACCESS**

Conference Delegates can access free wi-fi internet in the conference areas of the hotel. Access is gained via the password below.

Network: ACP2023 Password: Hilton.123

## INSURANCE

The Organising Committee of the conference is unable to accept responsibility for accidents or damage to the private property of delegates. Please ensure that you do not leave portable and valuable pieces of equipment unattended anywhere, and that you make your own arrangements for health, travel, general and other insurance.

## CPD

## Members of the ACP

You will be provided with a Certificate of Attendance. All members of the college will be eligible for CPD Points as per the CPD Program on the college website.

### Members of Other Colleges

You will be provided with a Certificate of Attendance. Each college has individual requirements on what can be claimed. CPD with other colleges is generally recorded as a self directed activity. Contact your CPD home for information on how they require you to record your activity.

### SPEAKERS PREPARATION ROOM

Speakers are asked to bring their formatted PowerPoint presentations to the Speakers Preparation Room the day prior or at least two sessions before their scheduled presentation. Files from thumb drives can be transferred to the servers at that time.

The speakers preparation room is located in Suite 2 beside the ballroom and will be open as follows:

Sunday 7 May	8:00 AM - 4:00 PM
Monday 8 May	8:00 AM - 1:00 PM
Tuesday 9 May	8:30 AM - 2:30 PM

### **REGISTRATION DESK HOURS**

The registration desk will be located in the Ballroom Foyer for the duration of the conference.

Saturday 6 May	8:00 A
Sunday 7 May	8:00 /
Monday 8 May	8:00 /
Tuesday 9 May	8:30 /

8:00 AM - 5:00 PM 8:00 AM - 4:00 PM 8:00 AM - 2:00 PM 8:30 AM - 2:00 PM

## **CONFERENCE APP**

Delegates are encouraged to download the conference app which includes the program, information, ways to contact your colleagues and the interactive voting app.

Scan the QR code below to gain access.

When accessing the app, use the event code **ACP2023** and be sure to log in using the details you registered with through EventsAIR.











## **INVITED SPEAKERS**



## Dr Erika Mendoza Phlebologist, Germany

Erika Mendoza studied medicine in Spain, where she was born and raised. After her PhD in Heidelberg (Germany) she specialized on Duplex Ultrasound of Superficial Leg

Veins in the Hospital, then in Courses at Ferrara and Paris.

Since 1995 she runs an office specialized on venous sparing surgery (CHIVA) first in Trujillo, Spain, since 1997 in Wunstorf, Germany, where she is responsible for the duplex diagnostics and treatment (conservative, endoluminal, ultrasound guided foam sclerotherapy) for veno-lymphatic diseases and cooperates with a surgeon for surgical interventions. At her place she organizes Hands-on Workshops on CHIVA Strategy since 2000 and on Duplex Ultrasound since 2007.

She started international cooperation and scientific investigation on anatomy and physiology in 2004 with the University Rome, later with the Imperial College (London), with the University of Bern (Switzerland) and University of Bochum (Germany), and performed and published lots of scientific research in cooperation or on her own. She published the first book on superficial venous duplex ultrasound in German 2006, currently in its 3d Edition (Springer, Heidelberg), which was reedited together with Lattimer and Morrison in English (Duplex Ultrasound of Superficial Leg veins, Springer, 2014) and is Co-Editor of the book Saphenous Veins Sparing Strategies in Chronic Venous Disease (Springer, 2019).

As General Secretary of the German Society of Phlebology since 2015 she was a member of German Guideline of Diagnostics and Treatment of Varicose Veins (2019). Currently she is part of the new Guideline of Diagnostics and Treatment of Lipedema.



#### A/Prof. Sriram Narayanan Vascular and Endovascular Surgeon, Singapore

After obtaining his medical and basic surgical training in India, Dr. Sriram Narayanan moved to the UK in 1997 where he went on to train in Upper GI, Thoracic and

Hepatobiliary surgery followed by 2 years of research in Transplantation. He was selected for the All-Wales Higher Surgical Training Program in Cardiff in 2002 with sub-specialty training in vascular surgery.

In 2008, Dr Narayanan moved to London as a Senior Vascular Fellow at the Charing Cross and St Mary's Hospital Vascular Units and in April 2010 was appointed as a consultant vascular surgeon at the University Hospital of North Staffordshire, UK. In March 2011, he moved to Singapore as a Consultant Vascular Surgeon at the Tan Tock Seng Hospital where he served as the Chief of Vascular and Endovascular Surgery and Adjunct Associate Professor to the Yong Loo Lin School of Medicine for over 6 years.

He was a Core Faculty Member of the National Healthcare Group Surgical Residency program and is an MBBS examiner for the National University of Singapore. His current appointment as a Senior Consultant Vascular and Endovascular Surgeon since August 2017, is at the Harley Street Heart and Vascular Centre, Novena Hospitals (part of the Parkway Pantai Group of Hospitals).

In September 2021, he set up The Venus Clinic, a unique clinic in Singapore dedicated to the care of Pelvic venous disorders (pelvic congestion syndrome). The clinic provides a unique environment for this condition, and has pioneered diagnostic protocols for screening, pelvic venous duplex scanning, pelvic floor physiotherapy, interventional techniques, and psychological support for these patients.

He has published articles on venous disease, transplantation, vascular access, vascular and endovascular surgery and peer reviews for the International Journal of Surgery, Phlebology and Journal of Translational Vascular Research. He is an internationally recognised key opinion leader and trainer in venous disease for Pelvic Venous disorders, glue ablation for advanced varicose veins, Intra Vascular Ultrasound (IVUS) and deep venous stenting.



## Prof. Vaughan Keeley Consultant Physician, UK

Professor Vaughan Keeley is a Consultant Physician who specialises in lymphoedema / lymphatic diseases.

He leads the lymphoedema

service in Derby, Nottingham and Mansfield, in the East Midlands of the UK.

The service treats all types of lymphoedema / chronic oedema in adults and children. It is one of the two centres in the UK specializing in paediatric and primary lymphoedema, which until the UK left the EU were part of the European Reference Network for Rare Diseases. It is a member of 2 recently established NHS England Rare Disease Collaborative Networks for paediatric and primary lymphoedema (PPL) and somatic overgrowth and vascular malformations (SOVM). In 2020, the service was designated as a Comprehensive Centre of Excellence for Lymphatic Diseases by the Lymphatic Education and Research Network (LERN).

His research interests include the early detection and possible prevention of lymphoedema in breast cancer and quality of life in lymphoedema.

He is an Honorary Professor at the University of Nottingham.

## FACULTY

Dr Melanie Andronicus Dr Oliver Chen Dr David Connor Dr Yani Dick Dr Teresa Girolamo Dr Joseph Grace Dr Ali Mahdi Haddar Al Sakkaf Dr Mehrdad Honarvar Dr David Huber Dr Vanessa Irvine Dr Shareen Jacob Dr Mina Kang Prof. Vaughan Keeley Dr Babak Khanzadi Dr Gilles Laur Dr Chris Lekich Dr Louis Loizou Dr Lisa Marks Dr Lucy McKinnon Dr Stuart McMaster Dr Erika Mendoza Dr Sriram Narayanan Dr Elizabeth Onley Dr Peter Paraskevas Prof. Kurosh Parsi Prof. Neil Piller Dr Christof Ragg Dr Stefania Roberts Ms Monika Samolyk Dr Shivakumar Sethuraman Dr Mei-Jo Sung Dr Simon Thibault Dr Paul Thibault Dr Peter Waddy Dr Lois Zhang





Saturday 6 May 2023

6:00pm

Balcony Rooms, Hilton Adelaide

JOIN US TO TASTE WHAT SOUTH AUSTRALIA IS RENOWNED FOR

# PROGRAM

## **PROGRAM AT A GLANCE**

	Saturday 6th May	Sunday Monday 7th May 8th May		Tuesday 9th May
830	ourmay		out May	Surrivay
900				Duploy Illtrasound in
930	Phlebology Training Course	Opening Plenaries	Venous Disease	Phlebology
1000				
1030		Morning <sup>-</sup>	Геа	
1100				
1130	Phlebology Phlebology Training	Vanaus Interventions:	Dermatology in	Venous Interventions:
1200	Course - Course - Advanced	Cyanoacrylate Closure	Phlebology	Endovenous Ablation
1230	Stream			
1300				
1330		Lur	hch	
1400	Phlebology			Cases and Clinical
1430	Phlebology Training Training Course -	lymphoedema	Hands-on	Puzzles
1500	Basic Stream Advanced Stream	29	Workshops	
1530	Afternoon	Теа		
1600				
1630	Phlebology Training Course	Patient Management		
1700				
1730		Poster Session		Speakers Dinner
1800			Conferring Ceremony	
	Welcome		and Gala Dinner	
	Reception			
Registration	0800-1700	0800-1600	0800-1400	0830-1/00
Exhibition		1000-1600	1000-1400	1000-1400
Speaker Room		0800-1600	0800-1400	0830-1430
Speaker Noolli				

## **SATURDAY 6TH MAY**

## PHLEBOLOGY TRAINING COURSE I

Chair: Lisa Marks			
830	Welcome Lisa Marks		
835	Explanation and Expectations of the ACP Training Program Stuart McMaster		
845	Venous Anatomy Lisa Marks		
900	Venous Physiology and Pathophysiology Joseph Grace		
915	Setting up a Phlebology Practice Louis Loizou		
930	Examining Patients with Venous or Lymphatic Disease Lisa Marks		
945	Informed Consent, Medicolegal and Ethical Issues Chris Lekich		
1000	Panel Discussion		

## PHLEBOLOGY TRAINING COURSE II (BASIC STREAM)

Morning Tea

Chair: Simon Thibault

1030

1100	Sclerosing Agents and their Biological Interactions David Connor
1115	Techniques of Sclerotherapy Simon Thibault
1130	Complications of Sclerotherapy Peter Paraskevas
1145	Necrosis after Sclerotherapy Mina Kang
1200	Advanced Sclerotherapy Techniques: Injecting Techniques, Periorbitals and Hands, Persistent Sciatic Veins, Peroneal Veins and VMs, Tumescent Assisted Sclerotherapy Peter Paraskevas
1215	Panel Discussion
1300	Lunch

## PHLEBOLOGY TRAINING COURSE II (ADVANCED STREAM)

Round Table Discussions (25 minutes per table)

- Table 1Endovenous Laser Ablation: Tips and Tricks<br/>Stuart McMaster
- Table 2Cyanoacrylate Ablation: Tips and TricksStefania Roberts
- Table 3Managing Patients with Lymphatic DiseaseNeil Piller and Vaughan Keeley
- Table 4 Ambulatory Phlebectomy Louis Loizou

## SATURDAY 6TH MAY

## PHLEBOLOGY TRAINING COURSE III (BASIC STREAM)

Round Table Discussions	(25 minutes	per	table)

Table 1 Challenging Cases Lisa Marks

- Table 2Protocols and Practical Applications of<br/>Sclerotherapy<br/>Joseph Grace
- Table 3 Compression Therapy Andrew Stirling

## PHLEBOLOGY TRAINING COURSE III (ADVANCED STREAM)

Chair: Da	avid Connor
1400	Pelvic Veins David Huber
1415	Saphenous Sparing Surgery in Deep Venous Pathology Erika Mendoza
1430	Conservative and Surgical Treatments for Lymphoedema Neil Piller

- 1445 The Cerebrospinal Venous System: Anatomy, Physiology and Ultrasound Assessment Paul Thibault
- 1500 Panel Discussion

1530 Afternoon Tea

## PHLEBOLOGY TRAINING COURSE IV - Q+A

Chair: Joseph Grace

- 1600 What I Wish I Knew When I Was Starting in Phlebology Paul Hannah Stuart McMaster Peter Paraskevas Chris Lekich Joseph Grace
- 1630 Panel Discussion and Q+A
- 1700 Closing

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Explore South Australia

# PROGRAM

## **SUNDAY 7TH MAY**

### **OPENING PLENARIES**

Chair: Lisa Marks Moderator: Paul Thibault

- 830 Introduction to ACP2023 Lisa Marks, ACP President David Connor, Convenor, ACP2023
- **840** Choosing Wisely: What do we know, how do we decide, why do we treat which patient Erika Mendoza
- **900** A novel algorithm for management of pelvic venous disorders Sriram Narayanan
- 920 Prevention in phlebology results of PREVENT2 Christof Ragg
- 940 The Triple C: Consent, Consult and Cool-off Period Kurosh Parsi
- 1010 Panel Discussion
- 1030 Morning Tea

### **VENOUS INTERVENTIONS - CYANOACRYLATE CLOSURE**

Chair: Kurosh Parsi Moderator: Peter Paraskevas

- **1100** Venaseal glue for recalcitrant venous ulcers in diabetics Sriram Narayanan
- **1110** Cyanoacrylate glue ablation for erectile dysfunction of venous origin Sriram Narayanan
- **1120** Measuring formaldehyde in medical cyanoacrylates Joseph Grace
- **1130** Infective Thrombophlebitis after Great Saphenous Vein Cyanoacrylate Embolisation Oliver Chen
- **1140** Allergic contact dermatitis caused by n-butyl-2-cyanoacrylate in VenaBlock vein glue Stefania Roberts
- **1150** Drug Device Delineation and Endovenous Medical Glues Kurosh Parsi
- 1220 Panel Discussion

1300 Lunch

The Australasian College of Phlebology Annual Scientific Meeting

## **SUNDAY 7TH MAY**

## LYMPHOEDEMA

Chair: Neil Piller Moderator: Vaughan Keeley

- **1400** The Management of Recurrent Cellulitis in Lymphoedema Vaughan Keeley
- 1420 Impact of climatic variations on lymphoedema the patient perspective Neil Piller
- 1430 Manual Lymphatic Drainage versus Intermittent Pneumatic Compression in Lymphoedema Treatment Erika Mendoza
- **1440** The impact of cycloid vibration therapy on blood flow, limb volumes and fluid distribution in the leg of a healthy volunteer Neil Piller
- **1450** The Different Treatment Options for Breast Cancer-related Lymphedema: Evidence Synthesis Study Ali Mahdi Al Haddar Al Sakkaf
- **1500** PhD Studies in Lymphoedema: 3 projects encompassing early detection, education and treatment Yani Dick
- 1510 Panel Discussion

1530 Afternoon Tea

## PATIENT MANAGEMENT

Chair: Chris Lekich Moderator: Niloofar Yazdani

- 1600 PFOs Peter Waddy
- **1620** Lipoedema, What is the Burden of Ignorance? Chris Lekich
- **1630** New and Emerging Treatments For Weight Management Teresa Girolamo
- 1650 Venous Disease, Wounds and other Co-existing Diseases, in a Community-based Vascular Diagnostic Clinic Monika Samolyk

### 1710 Panel Discussion

# PROGRAM

## **SUNDAY 7TH MAY**

## POSTER SESSION AND DRINKS

### Host: Joseph Grace

**1730** Sclerotherapy for Dorsal Hand Veins – a Literature Review Mei-Jo Sung

Measuring population-based outcomes of deep venous intervention is challenged by limitations in administrative health codes Vanessa Irvine

The Saphenous Nerve for the Phlebologist Melanie Andronicus

Arterial variations in lower limbs Babak Khanzadi

A systematic literature review of the management of superficial vein thrombosis Shareen Jacob

Heart Sink Patients - can we predict who will get matting Elizabeth Onley

Endovenous Laser Treatment of Varicose Veins: Our Experiences Rahul Khanna

A Comparative Evalulation of Topical Application versus Perilesional Injection of Platelet-rich Plasma in Diabetic Foot Ulcers Seema Khanna

1815

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REMEMBER TO CHOOSE YOUR SEAT FOR THE GALA DINNER ON THE CHART BY THE REGISTRATION DESK BY 2PM SUNDAY 7 MAY.

## **MONDAY 8TH MAY**

## **VENOUS DISEASE**

Chair: Gilles Laur Moderator: Andre van Rij

- 830 Bidirectional perforators are never normal Andre van Rij
- 850 Saphenous Vein Sparing Surgery: Primum non nocere Erika Mendoza
- **900** Venous insufficiency in children and adolescents: Progression over 4 -6 years Christof Ragg
- **910** Venous Adaptations in Endurance Atheletes Andre van Rij
- **920** Refluxing veins and neuropathy Gilles Laur
- **930** Eccentric venous ectasias of the intra- and epifascial system: A primary correlate of insufficiency. Christof Ragg
- **940** Can the treatment of vulval varices, with ultrasound-guided-sclerotherapy alone, be recommended as an effective treatment? What evidence exists to support this? Tamsyn Newell
- 950 Panel Discussion

### 1030 Morning Tea

## DERMATOLOGY IN PHLEBOLOGY

Chair: Adrian Lim Moderator: Kurosh Parsi

- 1100 Vascular Dermatology: Quiz Part 1 Kurosh Parsi
- **1130** Lower Limb Pigmentation: Relative contribution of haemosiderin and melanin in chronic venous disease and other cutaneous disorders Lois Zhang
- **1140** Reticulate Eruptions: Investigating the Origin Mina Kang
- **1150** A rare presentation of calciphylaxis Lois Zhang
- 1200 Skin cancer and Phlebology Gilles Laur
- 1210 Vascular Dermatology: Quiz Part 2 Kurosh Parsi

## MONDAY 8TH MAY

1300 Lunch

HANDS ON WORKSHOP				
20 minutes per w	orkshop			
Station 1 Sigvar	is			
Station 2 GE He	althcare			
Station 3 Device	e Consulting			
Station 4 Lohma	ann & Rauscher			
Station 5 Fujifilm	n Sonosite			

1745	Ceremony Gowning for ACP Academic Procession and Fellowship Recipients Pre Ceremony Drinks
1830	
	Conferring Ceremony and Gala Dinner Main Ballra am

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## MONDAY 8 MAY 2023, 5:45PM

Come one, come all, step right up and join the fun! Join us for an evening of fun and frivolity, fine food and great entertainment. The theme of the evening is Circus so don your favourite top hat, or let your imagination run wild.

\*One ticket is included with full registration, indicate attendance during registration. Additional tickets are available for purchase.

Conferring

. Ceremony

All delegates and exhibitors are invited to attend the Annual Conferring Ceremony and Gala Dinner which will be held in the Ballroom at the Hilton Adelaide. This is an evening of tradition where distinguished members of the Phlebological community and related fields are recognised for their efforts and contribution to the field of Phlebology. This is also the evening where new College Fellows are awarded their Fellowships and the College trainees are awarded their graduation for successful completion of the College training program. Please come along and show your support for our esteemed guests and emerging phlebologists.

## Monday 8th May 5.45pm

**Ballroom** 

**Hilton Adelaide** 

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## **TUESDAY 9TH MAY**

## DUPLEX ULTRASOUND IN PHLEBOLOGY

Chair: Joseph Grace

Moderator: Erika Mendoza

- **900** Duplex Ultrasound Investigation: Exploration of the GSV Erika Mendoza
- **930** The Veno arteriolar flow index as an ultrasound marker for venous outflow obstruction in venous insufficiency Sriram Narayanan
- 940 The Enigma of the Venous Pulse Wave Andre van Rij
- **950** Duplex changes in the right ovarian vein after left ovarian vein embolization Sriram Narayanan

1000 Panel Discussion

1030 Morning Tea

## **VENOUS INTERVENTIONS - ENDOVENOUS ABLATION**

Chair: Stefania Roberts Moderator: Steve Benson

- **1100** Comparing the Endovenous Thermal Ablative Technologies: Tips and Tricks Stefania Roberts
- 1120 Intraindividual comparison of 1470 nm and 1940 nm endovenous laser systems and Biomatrix sclerosing foam Christof Ragg
- **1130** Endovenous laser ablation using 1940 nm laser Shivakumar Sethuraman
- **1140** Hyaluronan gels in the treatment of valve lesions, vein dilatations and insufficiencies Christof Ragg
- **1150** Prophylactic Periprocedural Anticoagulation in Phlebology Lucy McKinnon
- 1200 Panel Discussion

1230 Lunch

## **TUESDAY 9TH MAY**

## CASES AND CLINICAL PUZZLES

## Chair: Lisa Marks

Moderator: David Connor

- **1330** How to Avoid and How to Treat Telangiectatic Matting Lisa Marks
- **1350** Superficial thrombophlebitis the underlying intricacies Lois Zhang
- 1400 Ulcer surgical management for the 1% Gilles Laur
- **1410** Lower limb ulcers is it that simple? Lois Zhang
- 1420 First Experience For Iliac Vein Stenting By Coronary Balloons In A Young Case Of Reverse May-Thurner Syndrome Mehrdad Honarvar
- 1430 Panel Discussion

1500 ACP 2023 Closing

![](_page_26_Picture_11.jpeg)

## **Compression Therapy in Veno-Lymphatic Disorders**

## BACKGROUND

### **PREVALENCE OF VENO-LYMPHATIC DISORDERS**

#### Venous disorders<sup>1</sup>:

C1 (spider & reticular veins): 59.1% C2 (varicose veins): 14.3% C3 (chronic leg edema): 13.4% C4-C6 (skin changes, healed/open ulcer): 3.6%

### Lymphatic disorders<sup>2</sup>:

Lymphedema: 1.8% (2% women; 1.5% men) Primary lymphedema: 1/3 of all lymphedema patients Secondary lymphedema: 2/3 of all lymphedema patients

#### Lipedema<sup>3</sup>:

Predominantly in women: 6-8%

### MANAGEMENT

#### The management of venolymphatic disorders is multifactorial & includes: · Compression therapy,

- a well-established treatment for veno-lymphatic conditions<sup>4</sup> Skin care
- Surgical techniques & other therapies
- Exercise / weight management
- Lymphatic drainage

This One-Pager focuses on compression therapy mechanisms, benefits and types, and on how to choose the best garment for an individual patient.

### **COMPRESSION THERAPY**

#### Mechanisms of action<sup>5</sup>:

- Improves venous return
- Decreases filtration
- Enhances lymph formation & lymphatic flow
- Reduces inflammation<sup>6</sup>

#### Beneficial effects⁵:

- Reduces signs & symptoms
- Reduces & prevents edema
- · Accelerates wound healing
- Improves & prevents skin conditions
- Reduces mechanical impairment & pain
- Increases physical activity & tissue stabilization; enhances quality of life

![](_page_27_Picture_32.jpeg)

## COMPRESSION THERAPY TYPES<sup>4,7</sup>

## **CIRCULAR KNIT**

### **CHARACTERISTICS**

- Fine, discrete stockings; softer, more elastic & esthetic than flat knit; no seam
- · Long-stretch properties; lower working pressure\* than flat knit
- · Availability of made-to-measure garments
- · Lower costs than flat knit or compression wraps

### USAGE

- · CVI (C0-C6; examples: heavy legs, varicose veins, early/mild edema; venous leg ulcers with the Ulcer X kit)
- · Mild to moderate lymphedema, lipedema or lipolymphedema, if limb has a uniform shape; can be used for the decongestive, transition or maintenance phase

## FLAT KNIT

## **CHARACTERISTICS**

- Thicker & stiffer materials compared to circular knit; highly resistant; with seam
- Short-stretch properties; higher working pressure\* than circular knit
- Flexible & versatile (custom-made)
- Comfortable with soft tissue or skin folds; comfortable at high compression classes

#### USAGE

- Moderate CVI (C3-C4)
- Mild to severe lymphedema, lipedema, lipolymphedema, with or without shape distortion (tissue containment); maintenance phase (can be used for the decongestive & transition phase); recommended after bandaging to prevent rebound

## **COMPRESSION WRAPS**

## **CHARACTERISTICS**

 Allow self-management (self-application & -adjustment, self-hygiene & skin care); enhanced treatment efficacy & enhanced quality of life;

cost-effective (washable, re-usable; time-saving); comfortable thanks to self-adjustment

· Short-stretch properties; high working pressure\* & low resting pressure\*

### USAGE

- Moderate/severe CVI (C3-C6)
- · Mild/moderate to severe lymphedema, lipedema or lipolymphedema, with or without shape distortion; maintenance phase (can be used for the decongestive & transition phase); also used to prevent rebound

![](_page_27_Picture_64.jpeg)

## COMPRESSION CLASSES & PRESSURE CHARACTERISTICS

## COMPRESSION CLASSES

(pressure at ankle):

![](_page_28_Figure_4.jpeg)

the regional norms) for circular knit and flat knit products.

#### \* PRESSURE CHARACTERISTICS

Resting pressure: pressure created at the interface of the compression textile and the limb in a **supine position** (when **resting**). This corresponds to the compression class of a given product. Working pressure: pressure created at the interface of the compression textile and the limb during **movement**. The increase in pressure that occurs during movement depends on the fabric stiffness. Stiffer material results in a greater increase in working pressure.

#### Two garments of the same compression class produce the same resting pressure, but the stiffer garment produces a higher working pressure.

A high stiffness effectively reduces edema, but it makes the donning of compression stockings difficult: this is why compression stockings have a lower stiffness compared to bandages or wraps.

![](_page_28_Picture_10.jpeg)

#### **CHOOSING THE RIGHT GARMENT<sup>4,7</sup>**

The choice of the correct garment for an individual patient is influenced by many factors:

- Clinical status of the patient (condition for which the garment is to be used; stage, severity & swelling site of edema)
- · Age, mobility, ability to manage/tolerate garments
- · Skin condition (fragile, ulcerated, normal)
- · Limb morphology
- Stiffness of the fabric
- **Self-care** (health status, patient's understanding of condition & desire to change) & financial situation of patient
- · Patient's preference

## TAKE-HOME MESSAGE

Compression therapy is a cornerstone in the management of veno-lymphatic disorders. A wide variety of compression products exist, each having specific characteristics that make them more or less suitable for an individual patient. The selection of the correct compression garment should consider many different factors. This is crucial for an effective and patient-centered therapy. References: (1) Rabe, E. et al. (2003). Bonner Venenstudie der Deutschen Gesellschaft für Phlebologie. Phlebologie, 32(01), 1-14; (2) Gültig, O., Miller, A., & Zöltzer, H. (Eds.). (2016). Leitfaden Lymphologie. Elsevier Health Sciences; (3) Herbst, K.L., et al. (2021). Standard of care for lipedema in the United States. Phlebology, 02683555211015887; (4) www.sigvaris.com; (5) Peripheral Edema One-Pager: www.sigvaris.com/stemmer-medical-platform#one-pagers; (6) Inflammation One-Pager: www.sigvaris.com/stemmer-medical-platform#one-pagers; (7) Framework, L. Best practice for the management of lymphoedema. 2006. MEP Ltd: London, United Kingdom. Note: All patients must have had a holistic assessment including ABPI before prescribing garments / medical devices.

## **EXHIBITORS**

## **BOOTH LISTING**

EXHIBITOR	воотн	EXHIBITOR	воотн
AMSL	1	GE Healthcare	10
Concept Health Pharma	8	Lohmann & Rauscher	3
Device Consulting	7	Medisol	4
Diverse Devices	11	Medtronic	9
Endotherapeutics	5	Sigvaris Group	6
Fujifilm Sonosite	12	Vein Doctors Group	2

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The Australasian College of Phlebology would like to extend its appreciation to all of our sponsors and exhibitors. Without their continued support we would not be able to bring our meetings to you year after year.

If you are on site be sure to visit our exhibitors during all meal breaks, they are eager to touch base after such a long time.

## Australasian Medical & Scientific Limited (AMSL) Booth 1

Australasian Medical & Scientific Limited (AMSL), subsidiary of Dexcom, Regenerative Medicine Division distributes pharmaceuticals and devices used by Vascular Surgeons, Phlebologists and Cosmetic Physicians for over 25 years. We are exclusive distributors in Australia and New Zealand of FibroVein by STD.

The Regenerative Medicine division also brings an autologous Platelet Rich Plasma (PRP) harvesting device into Australia for use in aesthetic medicine, sports medicine, MSK, and plastic surgery.

## Concept Health Pharma Booth 8

Concept Health Pharma is a wholesale distributor of specialised medication and had become a medical supplies destination for Doctors, Day Surgeries and Medical Centres.

As a company passionate about supplying innovative products to health professionals, the addition of the Bruise-eze® range of products to our portfolio provides a new treatment option for CVI.

- Angelica de Jesus
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- www.amsl.com.au

![](_page_30_Picture_12.jpeg)

- Sonia Gibson0450 262 668
- 🖅 sonia@concepthealth.com.au
- www.bruise-eze.com.au

![](_page_30_Picture_16.jpeg)

## **EXHIBITORS**

## Device Consulting Booth 7

Device Consulting is an experienced and rapidly expanding medical technology provider specialising in the field of lasers and energy-based devices (EBD). Primarily focused on the aesthetic market Device Consulting is also involved in the evolving surgical application of lasers.

Our specialist experience and understanding allow Device Consulting to advise and guide our clients in tailoring their selection of the most suitable and viable models - as well as the optimal application of the technology within the clinic. Our carefully selected range of top-branded international machines allows us to offer our clients a unique product mix covering most clinical applications.

## Diverse Devices Booth 11

Diverse Devices is an independent Australian company based in Australia and New Zealand. We operate in all states and territories and are committed to the supply and support of high quality medical devices.

We commenced operations in 2014 with a vision of becoming an innovative supplier of proven and emerging technologies to Health Professionals.

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![](_page_31_Picture_10.jpeg)

Ħ	Aidan McEvoy
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ŧ= <b>"</b>	aidan.mcevoy@diversedevices.com.au
	www.diversedevices.com.au

![](_page_31_Picture_12.jpeg)

Endotherapeutics	Ħ	Samantha Karamil
Booth 5		0423 271 686
Endotherapeutics was founded in 1999 with a small team, and a number of innovative, niche medical technologies that provided quality of life improving solutions to healthcare professionals.		skaramil@endotherapeutics.com.au www.endotherapeutics.com.au

Over 20 years of experience has allowed Endotherapeutics to develop extensive knowledge of the Australian and New Zealand healthcare systems. This includes the registration and reimbursement of new medical technologies and their successful sales and marketing.

Endotherapeutics

## Fujifilm Sonosite Booth 12

FUJIFILM Sonosite, Inc., the world leader in bedside and point-of-care ultrasound (POCUS), delivers solutions that meet the imaging needs of the medical community.

Headquartered near Seattle, the company is represented by a global distribution network in over 100 countries. As a recognized market leader, Sonosite continues to earn worldwide recognition for its innovative product line, educational programs, and advocacy for a broader understanding of ultrasound's many benefits.

## GE Healthcare Booth 10

At GE Healthcare, we are introducing the next era of possibility in patient care.

With more than 50,000 employees worldwide, we are not only building a healthier future but living our purpose to create a world where healthcare has no limits.

Our purpose is grounded in our heritage of innovation while pushing us to think bigger and bolder. We're working to solve the greatest challenges in healthcare that patients and clinicians face today, and in the future.

## Lohmann & Rauscher Booth 3

VENOSAN Compression Stockings are manufactured by Lohmann & Rauscher (L&R), a leading global manufacturer of high-quality, innovative wound management, compression products as well as operating room consumables & apparel.

L&R has over 170 years' experience around the world, focusing on providing solutions that meet clinician and patient needs. In Australia, L&R has created a dedicated Sales and Support team focused on Compression, to service clinicians, and in turn ensure positive outcomes for patients. With brands such as VENOSAN® (including Flat Knit & Made to Measure), ReadyWrap<sup>™</sup> and Rosidal®, L&R are uniquely placed to provide compression solutions throughout the entire patient journey, from the acute to maintenance phase.

- Veronika Kubacka 0412 140 992
- 🖅 veronika.kubacka@fujifilm.com
- www.sonosite.com/au

## FUJIFILM SONOSITE

- Maria Barreto
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- maria.barreto@ge.comwww.gehealthcare.com.au

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Craig Stewart1300 572 869

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- www.lohmann-rauscher.com/au-en/

![](_page_32_Picture_22.jpeg)

## **EXHIBITORS**

## Medisol

## Booth 4

MEDISOL was founded in 2018 in Sydney, Australia with the aim of supplying high guality, reliable and cost-effective medical devices and consumables to the public and private health institutions by utilizing the experience gained in the sector since 2003

MEDISOL currently supplies laser generators and fibers, radio frequency generator and catheters, VenaBlock embolization set and agent and all products have TGA certificate.

MEDISOL aims to reach the target audience with the cost effective, high guality and seamless service with clinically proven, advanced technology device and consumable solutions by improving the business understanding and product quality with the feedback of its customers.

## Medtronic

## Booth 9

Established in 1973, Medtronic Australasia now employs more than 800 staff across Australia and New Zealand. All are passionate about providing access to medical technology that changes the face of chronic disease. Our Australasian headquarters are in Macquarie Park, in Sydney, Australia. We have hubs in Melbourne, Brisbane, Adelaide, Perth and Auckland. Medtronic Australasia is a proud supporter of many community, patient support and medical research organisations. The groups we regularly support include the Heart of Australia, JDRF, Diabetes Australia, Parkinsons Australia, and Australian Red cross, and the Royal Flying Doctors' Service. We also donate end-of-lease laptops to the Friday Night School. Additionally, the Medtronic Foundation has supported relief efforts for the Queensland floods and Christchurch earthquake and is a proud supporter of

## Sigvaris Group Booth 6

the Stroke Foundation.

As a Swiss company, SIGVARIS GROUP is 100% family-owned since it was founded in 1864 in Winterthur by Moritz Ganzoni-Sträuli, the company collaborated with the phlebologist Dr. Karl Sigg and developed a medical compression stocking to improve venous function and relieve venousrelated conditions.

Today, SIGVARIS GROUP is committed to helping people feel their best with high-quality and innovative offerings in medical compression therapy. Every day. Worldwide. Our portfolio caters to a wide range of different needs and indications.

R Huseyin Yontar 0424 949 796

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- www.medisol.com.au

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James Chiou

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## **Medtronic**

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  - www.sigvaris.com

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## Vein Doctors Group Booth 2

Vein Doctors Group is a leading phlebology group with seven doctors providing venous services in Gold Coast, Brisbane, Ballina, Cairns, Mackay, Sydney and Melbourne. Vein Doctors Group is proud to provide career pathways to trainee phlebologists, as well as succession pathways to senior doctors.

As a growing group, we are currently seeking clinic locations with a high demand for venous services as well as trainee phlebologists to work alongside our supervisors to meet this demand. Careers with Vein Doctors Group offer training by our experienced supervisors and medical director, collaboration with other Phlebologists and trainees within the group, rewarding mentorships, as well as provision of the full range of marketing, administration, governance, IT, accounting, patient and practice management services.

- Sarah Pickup 0422 942 029
- **≢** spickup@miamiprivatehospital.com.au
- www.veinclinic.com.au

![](_page_34_Picture_7.jpeg)

![](_page_34_Picture_8.jpeg)

## VELAS<sup>™</sup>

The VELAS series from MEDISOL offer you a multiple choice for your different clinic requirement. Surgical applications require a technology that offers equally effective ablation and coagulation options. The VELAS series will offer you the different wavelength and power options so that you could choose a laser which suits your need best.

![](_page_35_Picture_2.jpeg)

## GBOX<sup>™</sup>

Having 15-30 watt power and various wavelength options and also being small in size new GBOX has the most affordable price in the market today. It can be used in the continuous as well as pulsed mode with a contact or non-contact handpiece

## Endovenous laser treatment

The 1470nm laser energy is preferentially absorbed in the intracellular water of the vein wall and in the water content of blood. The irreversible photo-thermal process induced by the laser energy results in a complete occlusion of the treated vein. The lower energy level needed using the radial laser fibre significantly minimized adverse effects compared with the bare laser fibre.

![](_page_35_Figure_7.jpeg)

## **MEDISOL** always provides a total solution to you

The laser systems involve to Urology, EVLT, ENT, Dental, Gynecological, Orthopedic, Plastic surgery and other areas. Each year, we develop at least one new laser system, to bring the new technology and application, safety and health for the patients.

VELAS				GBOX	
Wavelength	810/980/1210/1470nm	810/940/980/1064nm	810/940/980nm	810nm/980nm	1470nm
Max. Power	15W	30W	60W	30W	15W
Operation Mode	CW, Single or Repeat pulse				
Repetition mode	0.2Hz-20Hz		0.2Hz-50Hz	0.2Hz-20Hz	
Control mode	Touch Screen 8 True Color			Touch Screen 8 True Color and Encode Knob	
Weight	12.9 Kg		13.4 Kg	4Kg	
#### Saturn Side Fiber<sup>®</sup>

#### Saturn Slight Side Fiber

- Optimized laser emission profile with no front firing for efficient use of laser energy
- Welded fiber tip for maximum safety
- Available in size classic, medium and small to perfectly match Great and Small Saphenous Vein of perforator veins
- Precise laser marking

360° emitting Saturn Side Fiber<sup>®</sup> serves for the endovenous laser treatment in patients with venous insufficiency. With its 360° emission and optimal handling, the Saturn Side Fiber<sup>®</sup> is a trendsetting laser delivery device for medical applications in phlebology. Its ink-free marking eases positioning of the fiber tip inside the vein.

The Saturn Slight Side Fiber is built with the same proven precision and experience as the Saturn Side Fiber<sup>®</sup> to be utilized in small and perforator veins, due to its smaller outer diameter, without making compromises in stability and durability.

#### **In**finity Side Fiber

Lightguide's Infinity Side Fiber<sup>®</sup> is the next generation device for radial laser treatment

۰.

- Gentle energy transfer with low peak temperature
- Cylindrical 360° emission profile
- Reduced sticking to tissue
- Welded fiber tip design for highest safety
- Very uniform emission

Recent innovations made by Lightguide result in our best laser fiber for soft tissue laser surgery. The broad cylindrical 360° laser light emission of our Infinity Side Fiber ensures smooth and gentle laser energy delivery to the target tissue. Intra vascular, intrastitial and intracutaneous laser ablation treatments can benefit from the smoother procedure and higher patient comfort.

The optimized fused fiber tip design guarantees first-class safety and durability. The optical fiber has marking lines to ease positioning in the target tissue.

	Saturn Side Fiber <sup>®</sup>	Saturn Slide Side Fiber	Infinity Side Fiber <sup>®</sup>
Outer diameter(tip)	1.8mm or 1.6mm	1.3mm	1.3mm, 1.6mm or 1.8 mm
Standart Lenght(m)	2m 30s		
Wavelength (Nm)	980-2100		
NA	0.22 up to 0.37		
Core diameter (µm)	600 typically	400 typically	400 or 600 typically

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# ABSTRACTS



The Australasian College of Phlebology Annual Scientific Meeting

Choosing Wisely: What do we know, how do we decide, why do we treat which patient

#### Dr Erika Mendoza

#### Opening Plenaries, Ballroom - Plenary, May 7, 2023, 8:30 AM - 10:30 AM

The presentation starts with an explanation of the "choosing-wisely" movement and the results from the Choosing wisely process in France. Afterwards the personal view of the author concerning different situations in refluxing superficial veins from only tributaries, to complex axial reflux with ulceration and which possibilities we have to offer and then how to choose in each situation, also depending on patients' preferences and reimbursement situation.



#### Prevention in phlebology – results of PREVENT2

#### Dr. Christof Ragg<sup>1</sup>

<sup>1</sup>Angioclinic Vein Centers, Berlin, Germany

Opening Plenaries, Ballroom - Plenary, May 7, 2023, 8:30 AM - 10:30 AM

#### Introduction:

Venous insufficiency (VI) of the intra- and epifascial leg system is usually defined as a genetic disease of adulthood. It is assumed to be chronic. The common recommendation is to postpone invasive therapy as long as possible to reduce risks and costs. The introduction of various endovenous modalities has significantly increased safety and convenience, but costs are rising. Healthcare systems do not offer effective therapy until patients present with edema or symptomatic varices. After the eras of surgery and ablation, the next step is to prevent the disease.

#### Methods:

Together with the Prevention Working Group of the German Society of Phlebology, 335 relevant original publications and 37 guidelines were reviewed with the aim of an updated reappraisal of the prevention topic (PREVENT2 study).

#### Results:

Excellent data and prevention outcomes are given for anticoagulant therapy. For medical compression stockings no evidence for the prevention of VI could be found. There is also no causal evidence of preventive benefit for venotonic medications. Early stages of primary VI, which are the main target of potential prevention, are still not defined or differentiated in current classifications and recommendations. A few single-center studies suggest that VI may be a nonchronic, congenital condition with variable progression over decades, depending on the extent of initial lesions and cofactors such as exercise habits or pregnancy.

#### Conclusions:

While much professional attention has been paid in the past to the prophylaxis of acute and severe vein problems such as thrombosis and venous embolism, the same is not true for the socioeconomically far more relevant "chronic" disease of primary venous insufficiency. Analogous to dentistry, cost-effective early detection programs, prevention strategies, and early-stage therapies must now be developed.

# Infective thrombophlebitis after great saphenous vein cyanoacrylate embolization

**Oliver Chen**<sup>1,2</sup>, Hamid Hajian<sup>1</sup>, Ramon L. Varcoe<sup>1,2</sup>, and Shannon D. Thomas<sup>1,2</sup> <sup>7</sup>Department of Surgery, Prince of Wales Hospital, Randwick, New South Wales, Australia, <sup>2</sup>Faculty of Medicine, University of New South Wales, Sydney, New South Wales, Australia.

Venous Interventions - Cyanoacrylate Ablation, Ballroom - Plenary, May 7, 2023, 11:00 AM - 1:00 PM

The use of cyanoacrylate embolization has increased in interest as a safe, effective, and minimally invasive method to treat symptomatic saphenous reflux. The procedure is generally well tolerated by patients, and complications such as phlebitis are minor and usually self-limiting. Postprocedural infections have been described but occur infrequently and usually in the early postoperative course. In the present case report, we have described a late-onset infective thrombophlebitis of the great saphenous vein after cyanoacrylate embolization, requiring surgical excision of the treated vein.



The Australasian College of Phlebology Annual Scientific Meeting

# Allergic contact dermatitis caused by n-butyl-2-cyanoacrylate in VenaBlock vein glue

#### Jacqueline K Nguyen<sup>1</sup>, **Dr Stefania Roberts<sup>2</sup>**, Adriene Lee<sup>1,3</sup>

<sup>1</sup>Department of Dermatology, St Vincent's Hospital Melbourne, Fitzroy, Australia, <sup>2</sup>Victoria Vein Clinic, East Melbourne, Australia, <sup>3</sup>Occupational Dermatology Research and Education Centre, Skin Health Institute, Melbourne, Australia

Venous Interventions - Cyanoacrylate Ablation, Ballroom - Plenary, May 7, 2023, 11:00 AM - 1:00 PM

A 35-year-old female underwent treatment for bilateral lower limb saphenous reflux with VenaBlock, a cyanoacrylate-based closure system containing n-butyl-2-cyanoacrylate. She had a history of atopic dermatitis, asthma and allergic rhinitis. VenaBlock was injected percutaneously into both greater saphenous veins and the right small saphenous vein under ultrasound guidance. One day later, the patient presented with intense pruritis and an eruption at corresponding sites to the injections. She was treated with a 3-day course of 25mg oral prednisolone to good effect.

Patch testing was performed with the Australian baseline series, acrylate series, and the VenaBlock adhesive neat and diluted to petrolatum 50%. Butyl-cyanoacrylate was not commercially available for patch testing. Testing revealed a positive reaction to both VenaBlock neat and diluted to petrolatum 50%. Patch testing was also performed to VeinOff (containing n-butyl-2-cyanoacrylate), and there was similarly a positive reaction to VeinOff neat and diluted to petrolatum 50%. The remainder of the acrylate series was unremarkable. The patient was diagnosed with allergic contact dermatitis (ACD) secondary to VenaBlock and advised to avoid all cyanoacrylate-based products.

ACD secondary to acrylate-based medical adhesives such as Dermabond (2-octylcyanoacrylate) has been increasingly described in the literature. There are, however, very few reported cases of ACD to cyanoacrylate-based closure systems used for the treatment of lower limb venous reflux. Watts et al. reported on a case of ACD to VenaSeal (also containing n-butyl-2 cyanoacrylate) with no cross-reactivity to other allergens in the acrylate series. Like our patient, this suggests likely monosensitization to n-butyl-2-cyanoacrylate. Currently, nbutyl-2-cyanoacrylate is not available on acrylate patch test panels. Our case further reinforces the need for n-butyl-2-cyanoacrylate to be available for patch testing in patients suspected of ACD to surgical adhesives to allow for accurate diagnosis and treatment.



# Impact of climatic variations on lymphoedema - the patient perspective

Ms Susan Witt<sup>1</sup>, **Prof Neil Piller<sup>1</sup>** <sup>1</sup>Flinders University, Australia

Lymphoedema, Ballroom - Plenary, May 7, 2023, 2:00 PM - 3:30 PM

#### Introduction:

Chronic oedema is a significant problem worldwide and results in substantial burden to both health services and an individuals' quality of life. Higher temperatures and increased humidity have been reported to cause additional discomfort for people with chronic oedema, leading to reduced compliance with compression garment use, increased swelling and poorly managed symptoms. Rising temperature due to climate change is well documented and it is anticipated this will present significant challenges for the ongoing management of chronic oedema.

#### Methods:

A recently completed systematic review identified significant gaps in research from both a qualitative and a quantitative perspective. This phase of our study explored the patient experience through a series of focus groups completed in Germany and in Australia. Results have been thematically analysed.

#### Results:

Individuals with chronic oedema experience increased challenges in humid and warmer weather. This is more evident with a sudden change such as a holiday. Multiple additional management modalities need to be used such as exercise (yoga, pilates, swimming), dietary considerations, flat knit compression garments, water therapy and taping in order to maintain their swelling.

#### Conclusions:

The climate has a direct impact on an individual's experience of living with lymphoedema. Warmer temperatures and increased humidity provide the greatest challenges. Alternative treatment modalities are used to manage appropriately.

# Manual lymphatic drainage vs. intermittent pneumatic compression in lymphedema treatment

#### Dr Erika Mendoza

Lymphoedema, Ballroom - Plenary, May 7, 2023, 2:00 PM - 3:30 PM

#### Introduction:

Lymphedema is becoming highly prevalent as a consequence of obesity. Treatment with compression stockings and manual lymphatic drainage (MLD) avoids ulcerations in cases of BMI over 50. The "human resources" of therapists to treat these patients are limited, thus the idea came, if in the maintenance phase of lymphedema treatment intermittent pneumatic compression (IPC) could be an alternative.

#### Methods:

20 patients on maintenance phase (Stockings and MLD), stable weight and circumference measures for 1 year were treated, one month with IPC plus MLD, one with MLD alone and one with IPC alone. Circumferences, leg volume and QOL as well as Pain scores measured after each month.

#### Results:

There was no statistical difference between any of the three groups for measurements, QOL was slightly but not significantly better in all treatment groups compared to baseline

#### Conclusion:

IPC could be used to reduce the number of MLD from one or twice weekly to 1 or 2 in the month. A field study for one year is starting.





#### The impact of cycloid vibration therapy on blood flow, limb volumes and fluid distribution in the leg of a healthy volunteer

**Professor Neil Piller**<sup>1</sup>, Ms Marielle Esplin<sup>1</sup>, Ms Michelle Parsons<sup>1</sup>, Dr Richard Allen<sup>1</sup> <sup>7</sup>Flinders University, Bedford Park, Australia

Lymphoedema, Ballroom - Plenary, May 7, 2023, 2:00 PM - 3:30 PM

Introduction:

Cycloid Vibration Therapy (CVT) delivered by a massage pad has been previously shown to benefit those with leg lymphoedemas (Piller et al 2002) Our belief is that the vibration changes interstitial pressures, thus clearing accumulated fluids (containing inflammatory mediators/lipogenic factors etc) via the lymphatic system, but effect on vascular system was unknown (Piller, 2004)

#### Case details:

In this case study (one of a pilot clinical trial) the 52 year old participant was given CVT on the lower back, upper/lower left leg (10 mins per site). The leg for the CVT was randomly selected. The study involved the participant lying on the massage table for 30 mins with no treatment (placebo) and another visit when CVT was given (Treatment) . In both phases fluid levels were measured in the legs/trunk using Bio-impedance spectroscopy (In-Body), Leg volumes determined using Perometry (Pero systems), fluids at specific sites with a Moisture meter Delfin) and the blood velocity/flow into and out of the limbs prior to and immediately after treatment and at 1 hour follow-up. Velocity/flow were measured in SFA and FV using sonography with a trained sonographer.

Their were non-significant changes in blood pressure/pulse but important reductions in total limb volumes on the treated leg especially in the follow-up period (reduction of 174 mls/vs 39 ml increase in untreated leg). Further, there was a significant increase in the left SFA (253% increase inflow, 116% increase in velocity) and left FV outflow (202% increase inflow and a 175% increase in velocity compared to the untreated limb.

#### Conclusions:

CVT impacts on the blood flow into/out of the treated and non treated limb, one aspect of its hypothesised action. This case study justifies the continuing exploration of CVT to further elucidate its actions

Approved by SALHN ethics committee. (2021/HREC 0019). Study supported by CT Heath-Care, QLD

#### The Different Treatment Options for Breast Cancer-related Lymphedema: Evidence Synthesis Study

**Dr Ali Mahdi Al Haddar Al Sakkaf**<sup>1</sup>, Dr Jaume Masia, Ms Ariadna Auladell-Rispau, Dr Aliaa Shamardal, Mr Luis Vasconcello-Castillo, Mr Ivan Sola, Dr Xavier Bonfill <sup>1</sup>Universidad Autónoma de Barcelona, Barcelona, España

Lymphoedema, Ballroom - Plenary, May 7, 2023, 2:00 PM - 3:30 PM

Background:

The lifetime risk of developing lymphedema in women treated for breast cancer is up to 40%. Although the overall incidence is high, there is a lack of evidence regarding the treatment options for breast cancer-related lymphedema (BCRL). The aim of this study is to organise and describe the available evidence in this noteworthy topic and focusing on the randomised clinical trials (RCTs).

#### Methods:

Evidence mapping review was conducting according to the methodology proposed by Global Evidence Mapping (GEM) and adhered to the PRISMA-Extension for Scoping Review. We have performed a systematic search in MEDLINE, EMBASE, CENTRAL (Cochrane) and Epistemonikos, from the year 2000 to 2020. We included studies of all treatment options for BCRL, both surgical and non-surgical treatments.

#### Results:

A total of 240 studies were included in this mapping review distributed as follow: 147 experimental studies (102 RCTs and 45 quasi-experimental clinical trials), 48 observational studies (34 prospective and 14 retrospective studies) and 45 systematic reviews (SRs) (17 of them with metanalysis). All studies were published in English except two studies in Spanish, United States of America had the highest number of publications. Most of the RCTs were on non-surgical interventions. Only two RCTs addressed surgical intervention.

#### Conclusions:

In the last 20 years there were an average of 12 publications per year on the treatment of BCRL. There is a great tendency to publish non-surgical studies and high tendency to publish primary studies. Well-designed RCTs on surgery are needed to measure the real effectiveness of the applied interventions.



# PhD Studies in Lymphoedema – 3 projects encompassing early detection, education and treatment

Ms Susan Witt<sup>1</sup>, Ms Andrea Mangion<sup>1</sup>, <u>Ms Yani Dick<sup>1</sup></u>, Professor Neil Piller<sup>1</sup> <sup>1</sup>Flinders University, , Australia

Lymphoedema, Ballroom - Plenary, May 7, 2023, 2:00 PM - 3:30 PM

Introduction:

Medical science now recognises that all forms of chronic oedema involve the lymphatic system. Venous disease, for example, can lead to a secondary lymphatic insufficiency, due to the lymphatic system being overwhelmed with lymph load, which results in a form of lymphoedema called phlebolymphoedema. Given the impact of this condition on patient's lives, further research is needed into lymphoedema. Three current PhD students, under the supervision of Professor Neil Piller, are investigating the impact of lymphoedema from the perspectives of early detection, education and treatment.

#### Method:

1. Early detection by Yani Dick – This project is focussing on the prospective surveillance and early detection model of care.

2. Education by Andrea Mangion – This research project aims to explore the vast types of electronic health (eHealth) that are impacting lymphoedema care including general awareness and education for patients and practitioners.

3. Climate and lymphoedema by Susan Witt - This international project is exploring the extent to which climate and climatic variations impact on lymphoedema.

#### Results:

The PhD program at Flinders University can be completed full time over 4 years or part time over 8 years. The program can be completed remotely or on campus. Yani is based in Adelaide, Andrea in Sydney and Susan in Germany demonstrating that distance can be overcome through online communication.

Despite the differences in project focus and location, there remains significant overlap in the themes and scope allowing for all three students to support and work together, ultimately resulting in improved patient outcomes.

#### Conclusions:

Further research into early detection, education and treatment of lymphoedema is important to ensure that new discoveries inform current clinical practice. It is hoped that other clinicians will be inspired to pursue further studies in this area.

### Lipoedema, What is the Burden of Ignorance? -Online Survey 2022

#### Dr Christopher Lekich<sup>1</sup>

<sup>1</sup>Vein Doctors Group / Lipoedema Surgical Solution, Miami, Australia

Patient Management, Ballroom - Plenary, May 7, 2023, 4:00 PM - 5:30 PM

#### Introduction:

Lipoedema is a progressive inflammatory disorder where the legs and arms are disproportionate in size causing pain and reduced mobility. Lipoedema often accelerates comorbidities with the impact on patients far reaching both physically and psychologically. Upward of 11% of females in the community are affected. Lipoedema is often misdiagnosed by primary care physicians and specialists in Australia and first world countries. The purpose of this survey is to highlight the burden of lipoedema disease on Australian women. Lipoedema is not recognised by Medicare in Australia despite recognition by the World Health Organisation.

#### Methods:

On Tuesday 2nd August 2022, Dr Lekich's Lipoedema Surgical Solution patient community was invited (totalling over 12,000 "followers" on Facebook TM and Instagram TM) to complete a survey that was open for 36 hours to provide insights into the impact of lipoedema on Australian women.

#### Results:

183 women with a diagnosis of lipoedema responded with most of those women reporting seeing numerous GPs and specialists over many years before a diagnosis of lipoedema was made. Data collection from respondents highlighted significant impact on mobility, psychiatric and psychological conditions, the ability to work and the costs associated with managing lipoedema. 100% of respondents were forthcoming with a request to provide an impact statement relating to their lipoedema journey.

#### Conclusions:

For a progressive condition that robs mobility, early diagnosis with early appropriate intervention has been shown to significantly reduce the health burden on patients. The impact of misdiagnosis and inappropriate treatment on the quality of life and the financial burden of the disease warrants further research to advocate for Medicare recognition of lipoedema in Australia.

### SUNDAY PATIENT MANAGEMENT

# Venous Disease, Wounds and other Co-existing Diseases, in a Community-based Vascular Diagnostic Clinic

#### Ms Monika Samolyk<sup>1</sup>, Martin Forbes<sup>1</sup>

<sup>1</sup>Gateway Health, Regional Wounds Victoria: Hume-east

Patient Management, Ballroom - Plenary, May 7, 2023, 4:00 PM - 5:30 PM

Introduction:

In October 2020, a vascular clinic was founded by a community-based advanced practice wound nurse. A vascular sonographer scanned the veins and arteries, and the wound consultant removed any dressings/bandages, assessed the skin and lymphatics, and formulated a care plan with the sonographer. The aim of this prospective audit was to explore the incidence of venous disease and its relationship to lymphoedema / chronic oedema, arterial disease and wounding.

#### Methods:

The clinic operated on one day, every three weeks. Referral criteria included lower limb pain, chronic swelling (with or without a wound) and delayed wound healing. Quantitative analysis was undertaken on clinical assessment, and provisional, versus confirmed diagnoses.

The audit was conducted 7th October to 21st September, 2022. Assessment data were entered on to paper, at point of care, and later entered into an electronic database with the outcomes of the scan reports, following consultation with the reporting specialist. Endpoints for this audit were a subset of a larger database and included presence of venous disease, arterial disease, chronic oedema and at least one lower limb wound.

#### Results:

Of the total of 252 patients, venous disease was present in 60.9% (124/204), arterial disease was present in 87/223 (39.0%) and chronic oedema was present in 75.0% of all patients. 53.2% of all patients had had least one lower limb wound. All patients with confirmed arterial and venous disease (n=87) had co-existing chronic oedema.

#### Conclusions:

This audit identified the need for clinicians working with patients who have lower limb wounds or who are at risk of lower limb wounds, to have core skills in venous, lymphatic and arterial assessment. To-date venous disease has been largely considered as a discrete disease entity to other coexisting diseases. Results suggest that there may be a stronger relationship between multiple lower limb circulatory diseases and wounding.

# Saphenous vein sparing surgery. Primum non nocere **Dr Erika Mendoza**

Venous Disease, Ballroom - Plenary, May 8, 2023, 8:30 AM - 10:30 AM

This is an ethical approach to our daily work: should we treat everybody invasively? What do we know about results of wait and see? We will discuss the role of compression stockings, the role of minimalistic approaches. The question, why we tend to think, that veins are not able to restructure themselves, as they do demonstrate in every coronary bypass graft. A literature overview with presentation of the results comparing saphenous sparing vs ablating, the question, why these studies are ignored largely in the medical community. An invitation to harm less, to not act like a reflex treating like we always do, but consider each patient with all the available tools we have.



# Venous insufficiency in children and adolescents: Progression over 4 - 6 years

#### Dr. Christof Ragg<sup>1</sup>

<sup>1</sup>Angioclinic Vein Centers, Berlin, Germany

Venous Disease, Ballroom - Plenary, May 8, 2023, 8:30 AM - 10:30 AM

Introduction:

In the past, venous insufficiency of the lower extremities was thought to be an acquired disease of adulthood, mainly determined by genetic predisposition. Since 2017, studies using high-resolution ultrasound have provided evidence that venous valve defects are present in more than 50% of children and adolescents and are most likely of embryonic origin. We examined a subset of study participants from 2017 - 2018 with a follow-up of 4 - 6 years.

#### Methods:

Of 65 asymptomatic children and adolescents aged 6 - 18 years studied in 2017 and 2018, a random subset of n = 35 (18 w, 17 m) now underwent follow-up of leg vein status at 4 - 6 years using the same high-resolution ultrasound systems (16 - 23 MHz).

#### Results:

While in 8/35 cases (22.3%) no relevant change of the previous findings could be detected, 27/35 cases (77.7%) showed a functional progression, in particular a prolongation of the reflux pathway (10/27; 37.0%), a prolongation of the reflux duration with unchanged reflux pathway (8/27; 29.6%), an enlargement of a valvular diastolic gap (5/27; 18.5%) and the occurrence of additional findings, such as, Perforator or side-branch reflux (4/27; 14.8%). All subjects remained asymptomatic.

#### Conclusions:

Venous valve defects in the intrafascial and epifascial systems of children appear to be highly relevant precursors of subsequent clinical insufficiency. The majority of cases with valve lesions show significant progression within only 4-6 years. Based on this findings, larger studies and effective, cost-saving prevention strategies can now be developed.

#### Refluxing veins and neuropathy

#### <u>Dr Gilles Laur</u>

<sup>T</sup>Laurel Clinical, Gold Coast, Australia

Venous Disease, Ballroom - Plenary, May 8, 2023, 8:30 AM - 10:30 AM

Reflux is the most common pathology in patients with chronic venous disease. The saphenous veins and their tributaries are often the main cause, although less than 10% of patients with CVD reflux present with non-saphenous veins. Interestingly, only a few small studies report on refluxing veins associated with nerves. The most common location is in the surroundings of the sciatic nerve and its branches. Incompetent veins in this area may produce signs and symptoms related to the adjacent nerve on top of those due to the venous reflux.

This presentation will review the patterns of reflux in veins along the nerves, to describe the signs and symptoms, and evaluate the effect of treatment.



# Eccentric venous ectasias of the intra- and epifascial system: A primary correlate of insufficiency

#### Dr. Christof Ragg<sup>1</sup>

<sup>1</sup>Angioclinic Vein Centers, Berlin, Germany

Venous Disease, Ballroom - Plenary, May 8, 2023, 8:30 AM - 10:30 AM

Introduction:

The "typical" symmetrical bulge of a venous valve sinus is not present at birth, it develops slowly during the first decade of life under the influence of upright posture and gravitational forces. Eccentric dilated shapes of valvular areas observed in up to 82% of vein patients but described as nonspecific morphology ("ectasia" or "aneurysm") of a sinus. Differentiation is needed.

#### Methods:

In a retrospective analysis of HD ultrasound video scans (16 - 23 MHz) of consecutive cases (n = 758, 258 with follow-up > 3 yrs.), incidence, size and adjacent vein wall changes were registered. Using A.I. software (A.I.M., VeinBrain), all findings were correlated with patient age. Interferences with damage of other origin (pressure-induced or stasis-related) were filtered out.

#### Results:

Unilateral commissural leakage without eccentric valve ectasia was found predominantly in younger children (<12 yrs; 78.1%), slowly increasing with body growth and age (12-16 yrs.), developing mild ectasia (92.1%) and eventually (16-30 yrs.) expanding to a large unilateral bulge of the vein wall adjacent to the valve gap with increased reflux (96.5%). In adolescents and young adults up to 40 years of age, larger eccentric ectasias with a maximum diameter of more than 25 mm were found in 18.3% of cases, whereas patients older than 50 years had such ectasias in 28.8% of cases. Veins with multiple primary leaks had significantly faster progression (conversion from C0 to C2-C3).

#### Conclusions:

The frequent finding of "eccentric valvular ectasia" of leg veins originates from an initial unilateral commissural gap. Because the basic morphology occurs in the youngest subjects, this entity is most likely congenital, resulting from minor embryonic variations in valve shape and wall attachment. Progression and clinical severity increase as a function of the size and number of the initial leaks, distance to the nearest functioning valve, and exposure time (age).

Can the treatment of vulval varices, with ultrasound-guidedsclerotherapy alone, be recommended as an effective treatment? What evidence exists to support this?

#### <u>Dr Tamsyn Newell<sup>1</sup></u>

<sup>1</sup>Vein And Skin Clinic, New Plymouth, New Zealand

Venous Disease, Ballroom - Plenary, May 8, 2023, 8:30 AM - 10:30 AM

Introduction:

Vulval varicosities are a common presentation in a phlebology clinic. Typically they are a symptom of pelvic venous disease. Investigation with ultrasound and venography can be used to confirm the diagnosis; and treatment options include embolisation of pelvic veins, with ultrasound-guided-sclerotherapy (UGS) to pelvic tributaries. There is good evidence to support such investigations and treatment.

This research paper is looking to see what evidence is available to support the clinical decision to treat vulval varices with UGS alone, as can be performed in a phlebology clinic. How effective is this for our patients; is further investigation required; is embolisation essential?

#### Methods:

Review of current literature to see if evidence based research exists to support treatment of vulval varices with UGS alone, also including evidence to support the efficacy of this procedure in a clinic setting.

#### Results:

There were limited studies available, including no prospective randomised studies comparing different treatment options. Case studies and small review of literature studies support the idea that UGS alone can improve vulval varices, and may improve symptoms of pelvic venous disease. Some studies refute this. There is increasing evidence to support percutaneous embolisation of incompetent pelvic veins, as a treatment for pelvic venous diseases, with UGS performed on vulvar varices additionally. There is some nomenclature confusion surrounding pelvic venous disease and its symptoms in the literature, which has recently begun to be addressed. This may help future studies.

#### Conclusions:

There is a need for randomized comparative studies comparing embolisation of incompetent pelvic veins, with sclerotherapy of atypical vulvar varicosities that have a pelvic origin. Clinical symptoms of pelvic venous disease, and the presence of varicosities of pelvic origin, need to be diagnosed and categorised correctly to help with the design of future studies.

#### Lower Limb Pigmentation: Relative Contribution of Haemosiderin and Melanin in Chronic Venous Disease and Other Cutaneous Disorders

**Dr Lois Zhang<sup>1,2</sup>**, Dr Tann Wei Ng<sup>2,3</sup>, Dr James Pham<sup>1,2,3</sup>, Dr Samuel Thoo<sup>1,2,3</sup>, Dr Anes Yang<sup>1,2,3</sup>, Dr Mina Kang<sup>1,2,3</sup>, Dr David Connor<sup>2,3</sup>, Professor Steven Kossard<sup>3,4</sup>, Professor Kurosh Parsi<sup>1,2,3</sup>

<sup>1</sup>Department of Dermatology, St. Vincent's Hospital, Australia, <sup>2</sup>Dermatology, Phlebology and Fluid Mechanics Research Laboratory, St Vincent's Centre for Applied Medical Research, Australia, <sup>3</sup>Faculty of Medicine, The University of New South Wales (UNSW), Australia, <sup>4</sup>Kossard Dermatopathologists, Australia

Dermatology in Phlebology, Ballroom - Plenary, May 8, 2023, 11:00 AM - 1:00 PM

#### Introduction:

A common driver of skin pigmentation is increased melanogenesis. However, pigmentation can also result from other pigments such as haemosiderin. Pigmentation of the lower limbs is frequently seen in patients with chronic venous disease, especially in the advanced stages. We conducted a study to determine the composition of haemosiderin and melanin in skin pigmentation in patients with chronic venous disease (CVD) or other cutaneous disorders of the lower limbs.

#### Methods:

Forty-eight skin biopsy samples were taken from eighteen patients. Samples were taken from both pigmented areas and non-pigmented areas as control samples. Perl's Prussian Blue and Schmorl's stain were used to identify the pigment content of haemosiderin and melanin. Pigment content was then graded as none, mild, prominent and abundant.

#### Results:

Eighteen patients with diagnosed CVD, livedo vasculopathy (LV), post-sclerotherapy pigmentation (PSP), acroangiodermatitis (AAD) or post-inflammatory hyperpigmentation (PIH) were included. Dermal haemosiderin was increased in lesional samples of patients with CVD, LV, PSP and AAD. PIH and control samples did not contain dermal haemosiderin. Epidermal melanin was increased in all PIH samples, however LV, PSP and AAD did not display an increase. CVD patients classified as C5 and C6 from the CEAP criteria (Clinical, Etiologic, Anatomic, Pathophysiologic) displayed increased epidermal melanin, whereas patients at C4a and C4b did not have increased levels. Dermal melanin was mostly absent in CVD patients whilst mild and prominent levels were seen in PSP and PIH samples respectively.

#### **Conclusion:**

Dermal haemosiderin was found to be the predominant pigment in CVD and other lower limb cutaneous disorders. Epidermal melanin was only present in PIH and in pigmented lesions of advanced stages of CVD.

#### A rare presentation of calciphylaxis

**Dr Lois Zhang**<sup>1,2</sup>, Dr Mina Kang<sup>1,2</sup>, Professor Kurosh Parsi<sup>1,2</sup> <sup>7</sup>Department of Dermatology, St. Vincent's Hospital, Australia, <sup>2</sup>Faculty of Medicine, The University of New South Wales (UNSW), Australia

Dermatology in Phlebology, Ballroom - Plenary, May 8, 2023, 11:00 AM - 1:00 PM

Introduction:

Calciphylaxis is an uncommon entity that is usually seen in patients with chronic kidney disease undergoing renal dialysis. Necrotic lesions typically occur secondary to occlusion and calcification of arterioles and small arteries. The exact pathophysiology remains poorly understood, although there have been associations with hyperparathyroidism, autoimmune conditions, diabetes mellitus, obesity, malignancy, and medication use such as warfarin.

#### Case details:

We present a rare case where a 21-year-old male developed large stellate lesions on bilateral inner thighs after the commencement of enoxaparin along with rapid diuresis for management of acute heart failure secondary to acute dilated cardiomyopathy. He was also found to have polycythaemia requiring A possible underlying genetic cause to his dilated cardiomyopathy is still undergoing investigation.

#### Conclusion:

This is an interesting case which highlights a rare presentation of calciphylaxis in a young patient undergoing diuresis. This case is also complicated by the commencement of enoxaparin and the incidental finding of polycythaemia, both of which could have contributed to the thrombotic nature of the disease.



ABSTRACTS

#### Skin Cancer and Phlebology

#### <u>**Dr Gilles Laur**</u>

<sup>1</sup>Laurel Clinical, Gold coast, Australia

Dermatology in Phlebology, Ballroom - Plenary, May 8, 2023, 11:00 AM - 1:00 PM

Non-melanoma skin cancer (NMSC) is by far the most common cancer diagnosed in Australia but also the most visible.

According to ABS data in 2017-18, nearly one in three Australians had skin cancer. It is estimated that 207,943 people had been diagnosed between 1982 and 2017. Medicare records show there are over 1,100,000 paid Medicare services for non melanoma skin cancers each year with more than 3,000 treatments each day. Skin cancer is a reality that no doctor can ignore. Due to their profession, phlebologist are the among doctors in the best place to diagnose or identify skin cancers.

This presentation will review the common features of skin cancers to help the phlebologist in its daily practice



## Intraindividual comparison of 1470 nm and 1940 nm endovenous laser systems and Biomatrix sclerosing foam.

#### Dr. Christof Ragg<sup>1</sup>

<sup>1</sup>Angioclinic Vein Centers, Germany

Venous Interventions - Endovenous Ablation, Ballroom - Plenary, May 9, 2023, 11:00 AM - 12:30 PM

Background:

For a comparison of three different endovenous modalities (T/NT) with 6-month follow-up, an intraindividual randomized segmental comparison was chosen to exclude influences by different genetics, metabolism, motion patterns, and sensitivities.

#### Methods:

Sixty patients (18-77 yrs, BMI: 20-35, 41 f, 19 m) with 120 symmetrical insufficient truncal veins were selected, D = 6-30 mm (MW: 11.6 mm). The target vein was divided into three randomized segments for endovenous laser 1470 nm ("1470") or 1940 nm ("1940" both Lasotronix, PL) with anesthetic fluid compression (CPLA technique) and, outside the junction segment, a novel sclerofoam composition (biomatrix foam containing 2% POL, Biovena, Switzerland; "B-foam"). Objectives: 1) To compare sonomorphology and vein diameters at days 1, 3, 14, 60, and 180 and 2) to compare local discomfort during and after application up to 180 days by use of subjective 10-degree scales.

#### Results:

Mean treatment durations were 2:41 min (1470), 2:23 min (1940), and 0:31 min (B-foam) per 10-cm segment. All modalities had a segmental closure rate of 100% at day 3, all persisting after six months. Mean diameter reductions (week 8) were 38.2% (1470), 44.0% (1940), and 32.1% (B-foam). No relevant pain sensations were registered during the application. Within 8 weeks after the procedures, mean pain scores were 3.2/10 (1470), 2.5/10 (1940), and 3.2/10 (B-foam). There were no complications. Temporary discolorations occurred in 8/40 (20%, 1470), 5/40 (12.5%, 1940), and 11/40 cases (27.5%, B-foam).

#### Conclusions:

All modalities achieved the desired complete occlusions. All techniques operated primarily pain-free and at very low levels of discomfort during the follow-up period. Relative advantages were found for laser 1940 nm (best vein shrinkage, least pain of a laser application) and B-foam (fastest procedure, most comfortable procedure).

#### Endovenous laser ablation using 1940 nm laser

#### Dr Shivakumar Sethuraman<sup>1</sup>

<sup>1</sup>Advanced Trainee, Australasian College of Phlebology, Sydney, Australia

Venous Interventions - Endovenous Ablation, Ballroom - Plenary, May 9, 2023, 11:00 AM - 12:30 PM

Background:

Endovenous laser ablation has become a highly successful way of treating varicose veins. Over past 20 years, the wavelength used to treat varicose veins has gradually evolved from 810nm to now, the latest being 1940nm.

#### Aim:

To investigate and review the literature on the new 1940nm wavelength laser for treatment of varicose veins. Summarize its effectiveness, safety, complications and success rate.

#### Methods:

Literature search and review the research and published articles available to date regarding the 1940nm endovenous lasers. Collate and review the results.

#### Results:

The 1940nm wavelength laser is an effective therapeutic option for treatment of varicose vein disease. It has less complications and draw backs compared to lasers of shorter wavelengths.



### Hyaluronan gels in the treatment of valve lesions, vein dilatations and insufficiencies

#### Dr. Christof Ragg<sup>1</sup>

<sup>1</sup>Angioclinic Vein Centers, Germany

Venous Interventions - Endovenous Ablation, Ballroom - Plenary, May 9, 2023, 11:00 AM - 12:30 PM

Introduction:

The idea of adjusting vein diameter by injecting perivenous biocompatible gels emerged in 2013, and among various medical fillers, cross-linked hyaluronan was the safest choice. There are three ongoing pilot studies: 1) percutaneous valvuloplasty (PVP), which aims to restore local valve function; 2) focal venoplasty (FVP), which aims to reduce diameter to improve hemodynamics; and 3) segmental venoplasty (SVP) to permanently reduce diameter during endoluminal ablations.

#### Methods:

PVP was studied in 128 patients (74f, 54m, 25-72 yrs, GSV valves, diameter 6.8-18.4 mm) using 24 mg/ml hyaluronan. FVP was studied in 102 patients (53f, 39m, 24-69 yrs) for reflux reduction in GSV or SSV insufficiency, d = 6.8-22 mm, using hyaluronan 24 mg/ml. SVP was studied in 120 cases (63f, 57m, 41-74 yrs) with GSV or SSV insufficiency d > 8 mm as an adjunct to Biomatrix-Sclerofoam, using a less viscous hyaluronan (16 mg/ml). Follow-up examinations were performed at 1, 6, 12, 24, and 36 months.

#### Results:

PVP therapy eliminated reflux in 110/128 cases (85.9%). With FVP, 95/102 cases were successful (81.8%), achieving laminar alternating (n = 62) or orthograde flow (n = 48). With both applications, medical benefit was maintained after 36 months of FU, with one or two additional injections required in 73.2% of cases. SVP achieved technical success (>50% lumen reduction) in all cases (120/120), reducing postinterventional pain or discomfort to zero. No adverse reactions occurred with any modality.

#### Conclusions:

PVP is an effective and safe procedure to restore valve function, best suited for early stages of pressure-related valve decompensation. FVP for hemodynamic purposes proved to be feasible, effective, and safe. It holds promise for the development of novel "no-cut" modalities to spare veins. SVP as an adjunct to endovenous ablation greatly improves post-treatment comfort. All modalities are now waiting for manufacturers to offer reasonable products.

#### Prophylactic Periprocedural Anticoagulation in Phlebology <u>Dr Lucy Mckinnon</u>

Venous Interventions - Endovenous Ablation, Ballroom - Plenary, May 9, 2023, 11:00 AM - 12:30 PM

There is no consensus guideline on the provision of periprocedural anticoagulation in the context of phlebology. The author presents the findings of a survey covering the prescribing habits of doctors in Australia, covers basic pharmacology of the commonly prescribed medicines and proposes a formal guideline.



### TUESDAY **CASES AND CLINICAL PUZZLES**

#### Superficial thrombophlebitis - the underlying intricacies

**<u>Dr Lois Zhang</u><sup>1,2</sup>**, Professor Kurosh Parsi<sup>1,2</sup> <sup>7</sup>Department of Dermatology, St. Vincent's Hospital, Australia, <sup>2</sup>Faculty of Medicine, The University of New South Wales (UNSW), Australia

Cases and Clinical Puzzles, Ballroom - Plenary, May 9, 2023, 1:30 PM - 3:00 PM

Introduction:

Superficial thrombophlebitis is a relatively common disorder that is secondary to both inflammation and thrombosis.

Case details:

We present an interesting case of an unprovoked superficial thrombophlebitis of the distal great saphenous vein occurring in the left leg of a 65-year-old male. He was found to have bilateral lower limb incompetence on ultrasound study and thrombocytosis. His JAK2 mutation was subsequently found to be positive on further laboratory testing.

Conclusion:

This case highlights the potential intricacies of this condition as well as the factors that need to be considered when investigating and managing patients with superficial thrombophlebitis.



#### Ulcer surgical management for the 1%

#### Dr Gilles Laur

<sup>1</sup>Laurel Clinical, Kingscliff, Australia

Cases and Clinical Puzzles, Ballroom - Plenary, May 9, 2023, 1:30 PM - 3:00 PM

Venous ulcers are full-thickness defect of skin, most frequently in the ankle region, that fails to heal spontaneously and are sustained by chronic venous disease. The exact cause of venous ulcers is not certain, but a common denominator is generally venous stasis causing the pressure in veins to increase. Venous hypertension may also stretch veins and allow blood proteins to leak into the extravascular space, isolating extracellular matrix (ECM) molecules and growth factors, preventing them from helping to heal the wound. The main aim of the treatment is to create such an environment that allows skin to grow across an ulcer. In the majority of cases this requires finding and treating underlying venous reflux. Once patient has had appropriate endovascular treatment there are some simple office based procedures that can be done to help a faster healing for those patients often forgotten in the public system.



The Australasian College of Phlebology Annual Scientific Meeting

### TUESDAY CASES AND CLINICAL PUZZLES

#### Lower limb ulcers – is it that simple?

<u>**Dr Lois Zhang**</u><sup>1,2</sup>, Professor Kurosh Parsi<sup>1,2</sup>

<sup>1</sup>Department of Dermatology, St. Vincent's Hospital, , Australia, <sup>2</sup>Faculty of Medicine, The University of New South Wales (UNSW), , Australia

Cases and Clinical Puzzles, Ballroom - Plenary, May 9, 2023, 1:30 PM - 3:00 PM

Introduction:

Lower limb ulcers are a common occurrence and can be due to a large variety of causes. For effective treatment, the underlying cause should be identified and managed to promote healing and to prevent further occurrences. Atrophie blanche is a type of scarring that is often associated with chronic venous disease and livedo vasculopathy as it is due to blood vessel occlusion.

#### Case details:

We present an interesting case of a painful, non-healing venous ulcer of the right foot on a 77-year-old female who had a complex medical background that included essential thrombocythaemia in which she had been taking hydroxyurea. Atrophie blanche was present however she had no clinical evidence of reticular pigmentation.

#### Conclusion:

This case highlights an interesting diagnostic dilemma of chronic venous disease, livedo vasculopathy, hydroxyurea-induced ulcers and varicose ulcers. It also reminds us of the considerations required when approaching and managing lower limb venous ulcers.



### TUESDAY CASES AND CLINICAL PUZZLES

First Experience For Iliac Vein Stenting By Coronary Balloons In A Young Case Of Reverse May-Thurner Syndrome

#### Dr Mehrdad Honarvar<sup>1</sup>

<sup>1</sup>Nightingale Cardiology, , Australia

Cases and Clinical Puzzles, Ballroom - Plenary, May 9, 2023, 1:30 PM - 3:00 PM

Introduction:

Leg ulcer needs to a comprehensive evaluation. In some cases. leg ulcer is not due to reflux and pathology is obstruction.

#### Case details:

The Pt is a case of 24 Y/O with chief complaint of Right leg ulcer since 4 years ago. He claims; without any risk factor; developed leg oedema suddenly. After that; with impression of Right leg DVT had been started warfarin; but clinical result was very poor. Finally; he discontinued anticoagulants and stocking. We assess the Pt by ultrasonography and MRV; result was very interesting: Right external Iliac vein stenosis (Reverse May-Thurner Syndrome). His procedure of iliac vein stenting was very difficult: totally obstruction of Right Ext. Iliac vein; for first time, we used coronary wires and balloons for iliac vein stenting with excellent result.

Conclusions: Iliac vein stenting can result in wound healing.

Key words: Iliac vein stenting; coronary balloons; leg ulcer; DVT

Disclosure of Interest: None Declared



# POSTERS



The Australasian College of Phlebology Annual Scientific Meeting

#### Sclerotherapy for Dorsal Hand Veins – a Literature Review

#### <u>Dr Mei-Jo Sung</u>

<sup>1</sup>Canberra Vein Care by the R Clinic , Belconnen, Australia

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

#### Introduction:

This literature review provides a summary and evaluation of available studies on the efficacy and safety of sclerotherapy for dorsal hand veins aiming to guide evidence based clinical practice and highlights the limitations of research in this area. Sclerotherapy treatments for hand venous malformation are not discussed in this review.

#### Methods:

The author searched PubMed databases (from inception to December 2022) with keywords to identify potential studies. Studies of injection sclerotherapy (either as stand-alone treatment or in combination of other treatment modalities) involving dorsum hand veins for cosmetic or non-cosmetic purposes are included. Exclusion criteria include non-English literature, paediatrics population and venous malformations.

#### Results:

10 studies were included in the review. Studies consisted of system reviews and prospective and retrospective non-randomised clinical studies. Several studies discussed the efficacy of sclerotherapy for dorsal hand veins as part of hand rejuvenations. Types of sclerosant agents evaluated were detergent sclerotherapy sodium tetradecyl sulfate (STS) and less commonly polidocanol. Various concentration of STS (1-3%) and polidocanol (1.5% & 3%) were evaluated. Adverse events reported were pain, matting, ecchymosis, various degrees of oedema, thrombosis of the treated veins, rarely transient neuropraxia of the superficial branch of radial nerve, and a case of acute distal digit ischaemia.

#### Conclusions:

The sclerotherapy for dorsal hand veins can be an effective and safe treatment, where appropriate detergent sclerosant concentration were employed, for the treatment of dorsal hand varicose veins and hand rejuvenation. Lower concentrations of sclerosing agent appeared to be associated with higher incidence of failure. Non-serious adverse events common to sclerotherapy were reported. A rare but potentially devastating complication of digital ischaemia highlights the importance for the clinician's awareness of this complication. Research in this area is very limited and highlights the importance of future robust clinical trials in this area.

### POSTERS

#### Measuring population-based outcomes of deep venous intervention is challenged by limitations in administrative health codes

**Dr Vanessa Irvine<sup>1</sup>**, Dr John Crozier<sup>1</sup>, Dr Sarah Aitken<sup>2</sup> <sup>7</sup>Liverpool Hospital, Liverpool, Australia, <sup>2</sup>Concord hospital, Concord, Australia

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

#### Introduction:

Understanding deep venous intervention trends is essential, especially in the context of increasing endovascular treatment options. Routinely-collected health data is used to record and monitor the prevalence and treatment of specific diseases across populations. Population-based cohort studies using data-linkage rely on health information coded with the International Classification of Diseases (ICD-10-AM), and procedures classified with Australian Classification of Health Interventions (ACHI) codes. This routinely-collected health data study examines Australian trends in the deep venous interventions, and how effectively health administrative coding aligns with contemporaneous treatment.

#### Methods:

ACHI procedural codes from the Australian Institute of Health and Welfare (AIHW) datacubes (2015-2021) were evaluated to identify contemporaneous trends in deep venous interventions. Descriptive and comparative statistics were applied to this publicly available procedural information, which identifies the principal procedure performed in each public or private hospital admission.

#### Results:

Over the study period, 3538 venous thrombectomy procedures were performed. There were an additional 11870 procedures for vena cava filters, and 571 venous-venous bypasses. Significant annual increases in deep venous procedures, driven by twice as many closed thrombectomies of the iliac vein from 2015 to 2021, were identified. The lack of specific codes for endovascular treatment of deep venous disease was a major limitation for understanding procedural variation. Venous angioplasty/stenting were classified using the same codes as arterial interventions.

#### Conclusion:

Poor code specificity for endovascular venous interventions implies a significant underestimation of deep venous procedures performed in Australia. Increased iliac vein closed thrombectomy procedures may reflect more mechanical lysis, but rates of deep venous stenting are undifferentiated in the non-specific endovascular angioplasty/stent codes. Detailed deep venous intervention variations are currently unknown, and clinical benchmarking requires improved clinical coding specificity, defined clinical outcomes, and minimal data sets for auditing.

### POSTERS

### A systematic literature review of the management of Management of Superficial Vein Thrombosis

#### Dr Shareen Jacob<sup>1</sup>

<sup>1</sup>Pukekohe Family Doctors, New Zealand

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

Introduction:

To evaluate available evidence for the effective management of superficial venous thrombosis (SVT) with anticoagulants or expectant evaluation.

#### Methods:

Electronic databases and manual bibliographic searches were conducted to identify relevant studies. Data were extracted by two independent reviewers. Article searches were performed in MEDLINE, EMBASE, COCHRANE, LILACS and ongoing clinical trials at ClinicalTrial.gov.

#### Results:

The clinical manifestations, diagnosis, and treatment of phlebitis and thrombosis of the lower extremity superficial veins are reviewed here. Phlebitis and thrombosis involving upper extremity veins most often occurs in the context of upper extremity venous cannulation and is discussed separately. Evaluation and treatment of patients with DVT is discussed separately.

However, given the broad range of thromboembolic complication rates in SVT (between 0 and 30 % have been reported) it seems reasonable to suspect that risk stratification is needed to differentiate patients at low risk who may not benefit from anticoagulation from those at high risk who may need higher dosages or a longer duration of anticoagulation. Furthermore, prolonged treatment with injectable anticoagulants has been shown to result in poor patient adherence. Direct oral anticoagulants have recently been approved for venous thromboembolism therapy and these new drugs may offer advantages also for SVT patients.

#### Conclusions:

Underlying prothrombotic conditions should be sought in cases of recurrent SVT and migratory SVT, especially in the absence of varicose veins. Anticoagulation to prevent venous thromboembolic complications (DVT or pulmonary embolism) is warranted, especially in patients with SVT near the saphenofemoral junction, or when the superficial thrombus is 5 cm or greater in length

#### The Saphenous Nerve for the Phlebologist

#### Dr Melanie Andronicus<sup>1</sup>

<sup>1</sup>Southern Vein And Cosmetic Centre, Miranda, Australia

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

This poster aims to present a concise discussion of the saphenous nerve and its relevance to the practice of phlebology. A detailed exploration of the origin, anatomical course and associated anatomical structures will be presented along with discussion of the function and distribution of the saphenous nerve.

Analysis of the signs and symptoms of saphenous nerve injury, both from entrapment and iatrogenic injury, will also be discussed along with evaluation of the literature regarding the incidence and occurrence of saphenous nerve injury as it relates to the surgical and non-surgical management of GSV reflux and measures taken to avoid injury.



#### Dr Babak Khanzadi<sup>1</sup>

<sup>1</sup>Vein Doctors Group, Runaway Bay, Australia

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

Introduction:

In our ultrasound exams, we often rule out arteries using pressure or colour Doppler. However, due to time constraints or lack of experience, we may really come across an artery that is not in its usual anatomical place and fail to make the vein/artery comparison.

#### Methods:

Reading the existing literature from the websites of SAGE, PUBMED, and Google Scholar and the Zwiebel introduction to vascular ultrasonography book.

Results:

The lower extremity's vascular architecture is fairly constant and anatomical differences infrequently occur.

The most frequent variations include: hypoplasia or aplasia of the anterior tibial artery with absent dorsalis pedis, anomalous dorsalis pedis artery location, absence of the posterior tibial artery with potential proximal reconstitution, high popliteal artery bifurcation, and duplication of superficial femoral artery.

#### Discussion:

Understanding these variances is of value for endovascular and open surgical therapy as well as accurate diagnostic radiological findings.

Perhaps it is better to perform a complete venous and arterial ultrasound assessment before to surgeries, or at the very least for individuals who exhibit any symptoms of arterial disease. For phlebologists, learning arterial ultrasound examination of the lower limbs may be a good idea. Additionally, in elderly patients and those at high risk for atherosclerosis, such as smokers, diabetics, and those with a history of CVA, TIA, or MI, complete arterial and venous mapping may be a better option prior to any vascular procedures.

### POSTERS

#### Heart sink patients - can we predict who will get matting?

#### Dr Elizabeth Onley<sup>1</sup>

<sup>1</sup>Border Medical Laser And Aesthetics, Wodonga, Australia

Poster Session, May 7, 2023, 5:30 PM - 6:30 PM

#### Introduction:

Telangiectatic matting is a complication that effects up to 15-20% of cases post sclerotherapy. While there are a number of technical factors that we know of that can help reduce this risk, there is little information about patient specific factors that may be able to predict the risk of this complication occurring. The aim of this poster was to research any patient specific factors that may be able to predict risk of matting post sclerotherapy.

#### Methods:

Literature search - PubMed and Cochrane library

#### Results:

A literature search was performed through PubMed and the Cochrane library on the topic. Current consensus is that telangiectatic matting is attributable to a reactive inflammatory or angiogenic mechanism. There is a significant amount of information available on technical factors that can be modified to reduce this risk, including avoiding high concentrations of sclerosants, high infusion pressures or large volumes of sclerosant where possible. Information about patient specific risk factors was less readily available. Very limited studies were available that listed excessive body weight, hormone treatments with estrogens, female sex, longer duration of spider veins and family history of telangiectasia as positive risk factors. One study found a positive link between a history of atopy or a bleeding tendency and increased risk of matting. There was no link found between risk of matting and age, profession, Fitzpatrick skin type or ethnicity.

#### Conclusions:

A history of being overweight, female, on estrogen therapy and having a family history of spider veins seems to predict an increased risk of post sclerotherapy matting. Having a history of atopy or bleeding tendency may also be implicated. Further investigation needs to be carried out to determine if any other patient specific risk factors can be used to predict an individual's risk of matting post sclerotherapy.


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